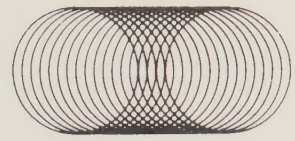
MC00264

3|3

Manufacturers
Data
Base



Ceiling system

Ceiling system

Department of Health
and Social Security
January 1973

Contents

		page
INTRODUCTION	General introduction	3
	Component introduction	4
COMPONENT DESCRIPTION	Description	
	Dimensional discipline	5
	Performance standards	8
	Accessories	9
USE	Use selection	
	Detail use	11
	Schedules	12
SELECTION	Coding conventions	16
	Coded range	18
	Code index	27

Digitized by the Internet Archive
in 2025 with funding from
UCL Library Special Collections

https://archive.org/details/ucl_mc0026

2

Introduction

3 General Introduction

This 1973 Edition of the MDB incorporates some changes suggested by the users.

Feedback from the users can materially assist the Department's monitoring functions. Forms for this purpose will be available.

Technical Document

The Technical Document for each component (see list on back cover) gives component descriptions, dimensional ranges and coding, and advises on selection and use.

Product Specification

The Product Specifications will be supplied by each of the selected manufacturers. A folder will be supplied for each range of components described in the Technical Documents. Manufacturers will send approved MDB information direct to the users. This will include descriptions of performance, details of junctions with adjoining components, drawings or photographs and the fixing and maintenance services offered, sufficient for a user to make a choice of manufacturers in his area. This detailed information should be checked again at tender stage.

Price List

The Price List for each component range gives prices obtained from each manufacturer, the terms and conditions under which these prices have been obtained and the method of measurement. This is a confidential document and will be supplied only to users of the components.

Use and Index

The Use and Index is the key document giving information about the other documents and the use of the system. Part of the Use and Index will be a list of the name, address, telephone number and customer contacts of each of the selected manufacturers.

Service Document

The Service Document is primarily intended for the Main Contractor and gives information about the service he will get from and be required to provide to the selected manufacturer.

Colour Coding

Technical Documents have BLUE covers.

Product Specifications have YELLOW covers.

Price Lists have RED covers.

Component Introduction

4

This document describes
CEILING SYSTEMS
generally suitable for
Health and Welfare buildings.

In the following sections the
CEILING SYSTEMS
are described in detail.

In Use and Index it is stressed that successful use of co-ordinated components depends on:-

1 Orderly selection to ensure functional compatibility.

2 Acceptance of dimensional conventions for the incorporation of components in both design and production stages.

3 Definition of junctions within these dimensional conventions so that standard co-ordinated components can always be used.

MDB components have been selected on this basis and the MDB range offers functionally suitable components which are compatible with adjoining components.

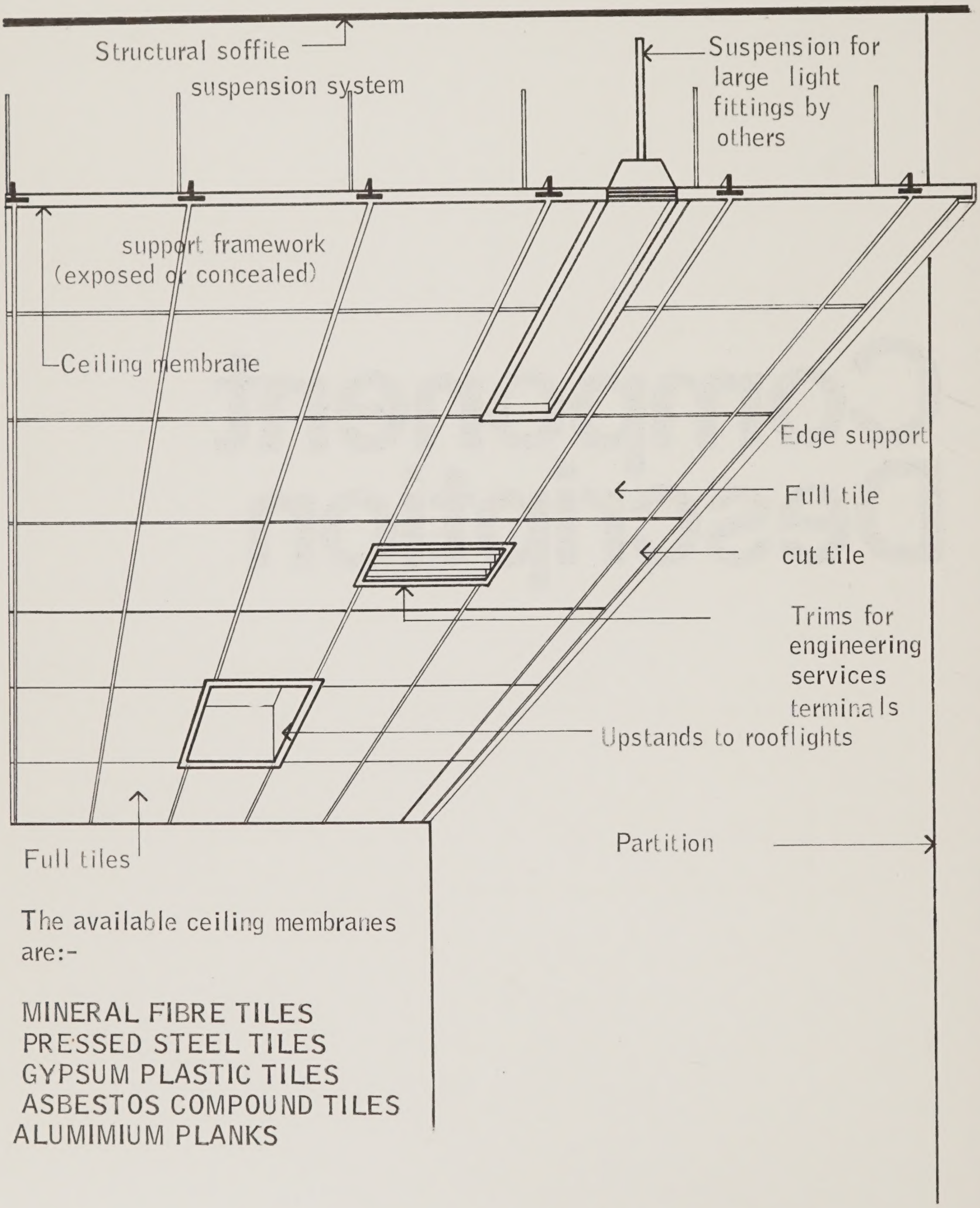
Data given in this document is applicable to all selected components in this category. It is supplemented by manufacturers details given in their product specifications.

The coding used is part of a data co-ordination system based on the CI/SfB system.

5

Component Description

6 Component description



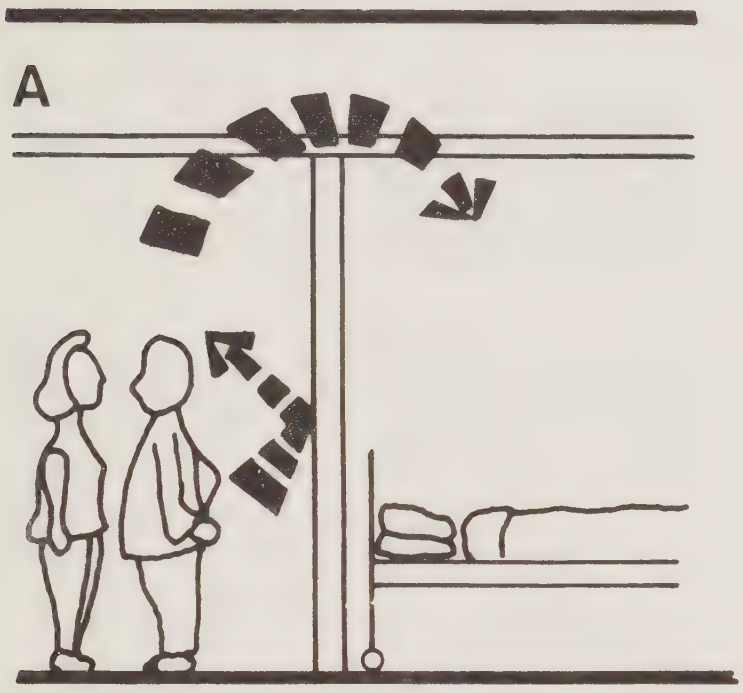
The available ceiling membranes are:-

MINERAL FIBRE TILES
PRESSED STEEL TILES
GYPSUM PLASTIC TILES
ASBESTOS COMPOUND TILES
ALUMIMIUM PLANKS

TYPICAL ARRANGEMENT

Component description

The method of selecting a ceiling system is generally determined by the following factors:
(a) Partition/Ceiling relationship.
(b) Sound Absorption and fire rating.
(c) Dimensional discipline.
(d) Functional Variants - demountability, ease of cleaning and surface finish.



A

High or low sound attenuation ceiling membrane can be provided where partitions stop at ceiling level. This allows the service void to be continuous.

B

Low attenuation ceiling membranes only should be provided where partitions penetrate the service void.

Partitions available are:
Type A and B are continuous above the ceiling membrane.
Type C - NOT continuous above the ceiling membrane
Partitions are available:
Grade 1 over 40 decibels, Grade 2, 35-40 decibels.

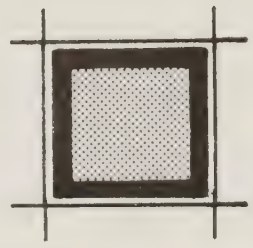
Sound attenuation	Sound absorption	Flame spread Class	Ceiling grades
High	High	0	A
	Low	0	B
Low	High	0	C
	Low	0	D
No perform -ance	No per- formance	0	E

The table shows the alternative functional qualities of ceiling membranes into five grades.

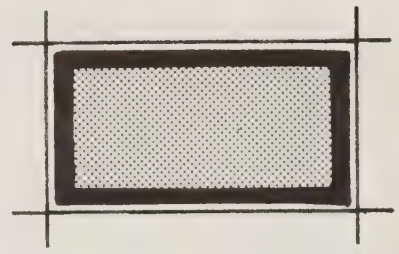
8 Dimensional discipline

Ceiling tiles are available in the following sizes

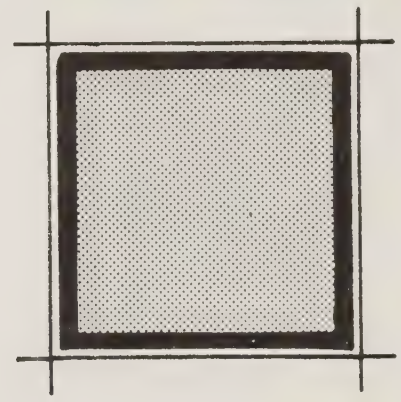
300 x 300



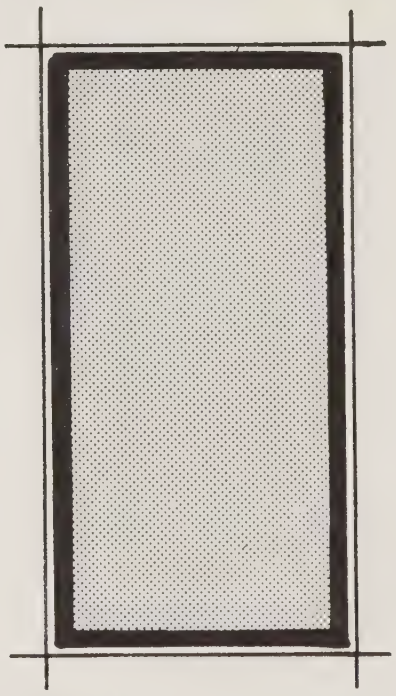
300 x 600



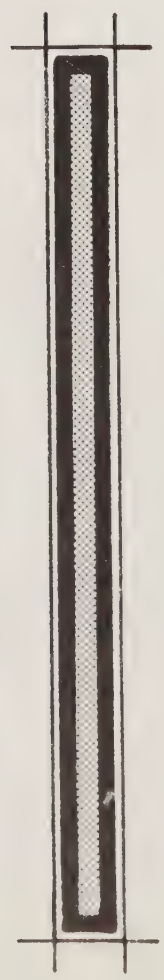
600 x 600



600 x 1200



100 plank
any length
up to 6900



Preferred room heights from floor to the underside of the suspended ceiling are :

2400
2700
3000

Performance standards

9

1·1

Sound attenuation.

All Ceiling Systems are designed to achieve a minimum sound reduction factor of 30 decibels when measured in accordance with BS2750 1956.

1·2

Sound Absorption

Ceiling Systems are available with high and low sound absorption levels as follows:

a. High sound absorption - ISO rating above 0.65 at 500 hertz.
b. Low sound absorption - ISO rating below 0.65 at 500 hertz.

1·3

Ceiling membranes have a Class 0 surface spread of flame.

1·4

Fixings are designed to be capable of taking the following forces:

a. A force of 100N applied to the face at an angle of 45 degrees to the face in any direction.
b. A force of 250N applied at an angle of 90 degrees to the face.

For detailed information, the User should refer to Manufacturers Product Specification.

10

Use

11 Use selection

For the purpose of selection the following procedure is suggested.

item	selection sequence	choice	page
1	Choose performance standard of ceiling and partition together.	(a) Required acoustic performance (b) Required fire performance	9
2	Select Attenuation rating :	(a) High sound attenuation (b) Low sound attenuation (c) No rating	9
3	Select Sound Absorption and Flame Spread :	(a) High sound absorption and Class '0' flame spread (b) Low sound absorption and Class 1 flame spread (c) High sound absorption and Class 1 flame spread (d) No rating	9
4	Select type of fixing :	(a) Concealed grid-suspended (b) Exposed grid-suspended (c) Concealed grid-direct to structural soffit (d) Exposed grid-direct to structural soffit	18 - 26
5	Select size of tile :	(a) 300 x 300 (b) 300 x 600 (c) 600 x 600 (d) 600 x 1 200 (e) 100mm strip	8
6	Select membrane materials :	(a) Mineral fibre (b) Pressed steel (c) Gypsum plaster (d) Asbestos compound (e) Aluminium(strip only)	18 - 26
7	Select perimeter trim		to be issued
8	Select removable access panels	(a) Mineral fibre (b) Pressed steel (c) Gypsum plaster (d) Asbestos hinged or loose (e) Aluminium hinged or loose	to be issued

Use detail

12

Health Service Design Note No 5 "Co-ordination of components for Health Buildings and Space Data" gives information about the horizontal and vertical controlling dimensions and the location of components.

This section brings together some of the details in Note No 5 with the data on ceiling systems in this document.

Design stage

The following principles are suggested for the layout of tile ceilings. No ceiling should be made up of a mixture of tiles of different sizes, and either all ceilings should be made up of a number of full tiles or where this condition cannot be met there should be an even perimeter finish.

1·0 In the case of a ceiling composed entirely of whole tiles this condition can only be met when the room dimensions in both directions are multiples of 300mm. In all other cases a perimeter detail is necessary. The details vary from manufacturer to manufacturer. Details of the particular method adopted should be obtained from the manufacturers' PRODUCT SPECIFICATION.

2·0 The selection of the appropriate tile size to be used in a room will be influenced by the following :

2·1 Where the dimensions are multiples of 600mm in both directions, 600 x 600, 600 x 1200, or 1200 x 1200 tiles may be employed.

2·2 Where the dimensions are multiples of 600mm in one direction and multiples of 300mm in other directions 300 x 600 tiles may be appropriate.

2·3 Where the dimensions of the room are multiples of 300mm in both directions 300 x 300 tiles may be used.

2·4 In small rooms 300 x 300 tiles may be preferred.

2·5 The larger tiles are more appropriate to larger rooms and when "lay-in" grid systems are employed.

3·0 In rooms of high humidity metal tiles or special tiles must be used.

4·0 Ceilings should preferably be set out from the centre of the space so that opposite borders will be equal.

5·0 The ceiling systems are coded using a six-facet code, e g 35AAAA. The details of codes and range is shown on pages 18 et seq.

The selected code should be shown on the ceiling plan.

Production stage

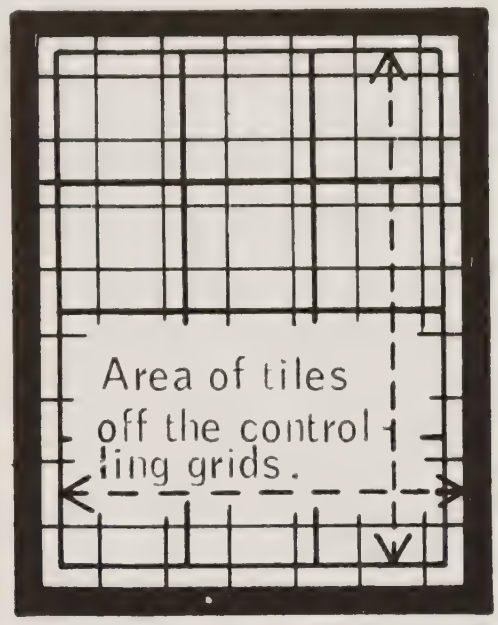
At this stage the ceiling plan is accurately drawn and related to light fittings and other engineering services.

13

Use detail

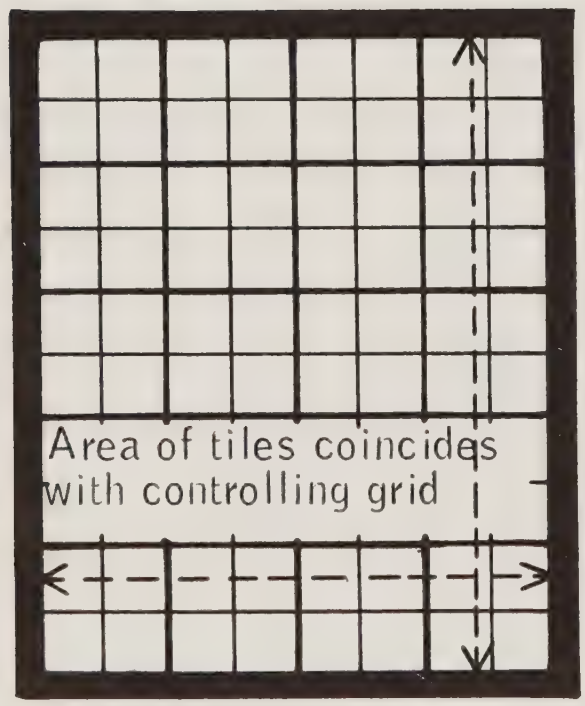
These figures show : how the ceiling tiles are located to coincide with or off the 300mm planning grid.

CEILING TILES LOCATED ON THE 300mm CONTROLLING GRID



Ceiling plan

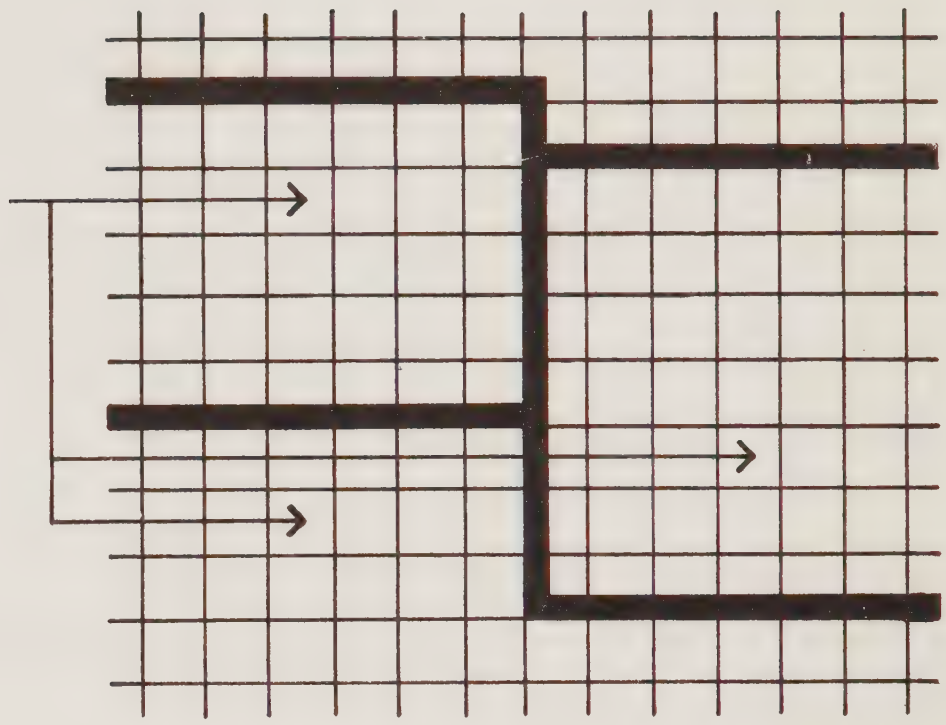
TILES LOCATED TO COINCIDE WITH THE 300mm PLANNING GRID



Ceiling plan

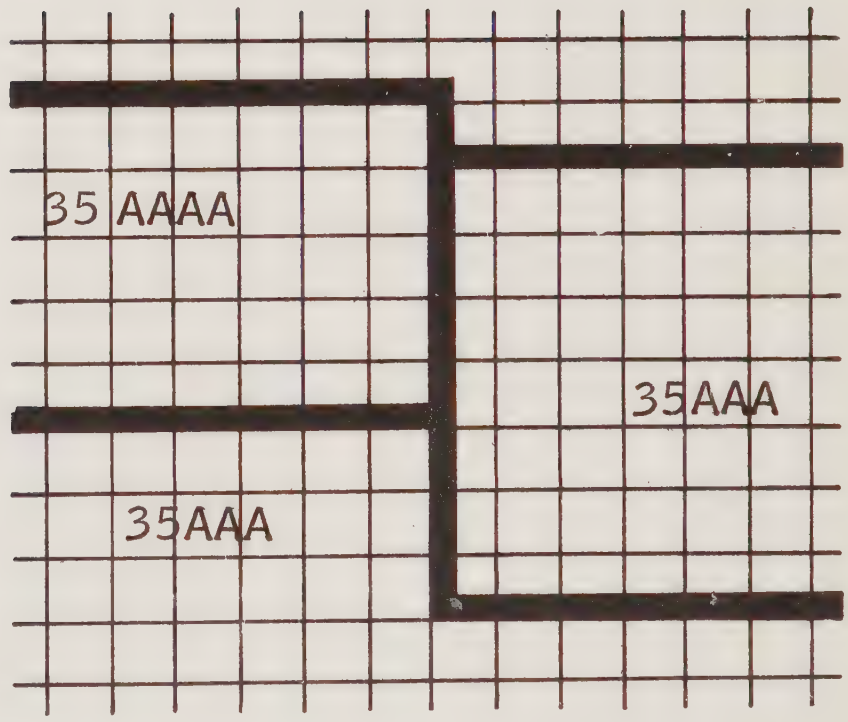
Use detail

14



Design stage

This figure shows that the full information on the sketch plan has been put into coded data for processing by the Quantity Surveyor and the Manufacturer.



Production stage

15

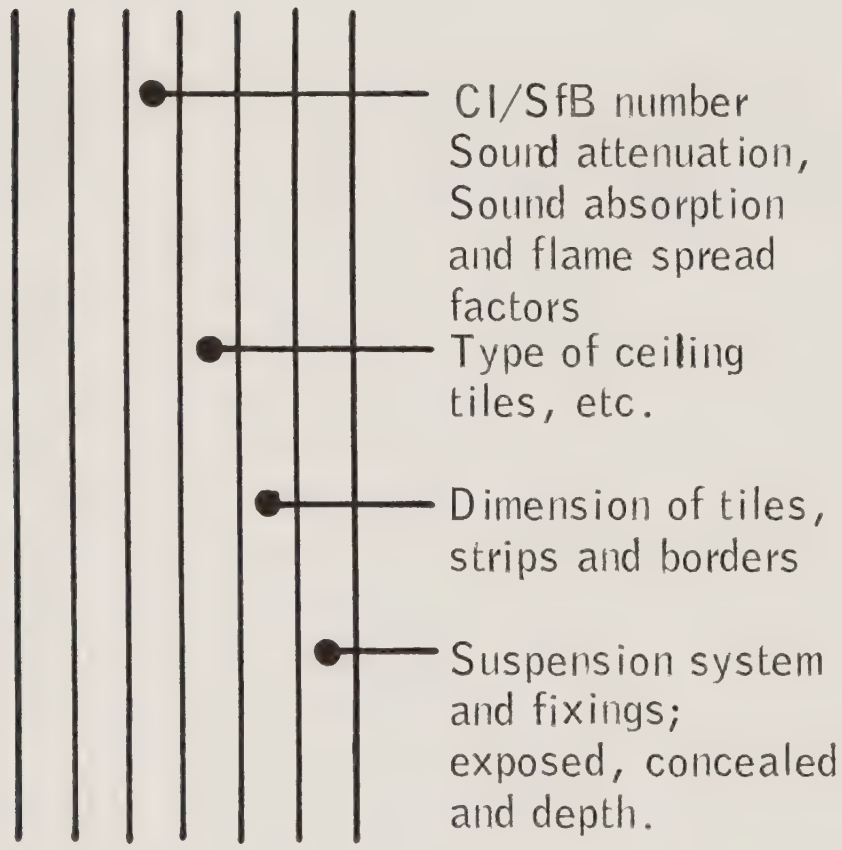
Selection

16 Coding conventions

This table is shown for information purposes only.
No attempt should be made to extend the range of coded items.

The coding for ceiling systems is based on a six-facet alpha-numeric code e.g. 35AAAA.

The first wo figures (35) are SfB numbers. Each of the following four letters has different meaning by sequence in series as follows _


CI/SfB number
Sound attenuation, Sound absorption and flame spread factors
Type of ceiling tiles, etc.
Dimension of tiles, strips and borders
Suspension system and fixings; exposed, concealed and depth.

Range selection

PRESSED STEEL	–	concealed grid	18
PRESSED STEEL	–	exposed grid	not available
GYPSUM PLASTER	–	concealed grid	19
GYPSUM PLASTER	–	exposed grid	not available
ASBESTOS COMPOUND	–	concealed grid	20
ASBESTOS COMPOUND	–	exposed grid	21
MINERAL FIBRE	–	concealed grid	22
MINERAL FIBRE	–	exposed grid	23
ALUMINIUM STRIPS	–	concealed grid	24
ALUMINIUM STRIPS	–	exposed grid	not available
TRIMS FOR ROOFLIGHTS			25
ACCESS PANELS			to be issued
PERIMETER TRIM			to be issued

18 Pressed steel tiles concealed grid

tile size	Fixing and suspension	grades				
		A	B	C	D	E
300 x 300	to soffite		35BBAL	35CBAL	35DBAL	
	300		35BBAA	35CBAA	35DBAA	
	600		35BBAB	35CBAB	35DBAB	
	900		35BBAC	35CBAC	35DBAC	
	1200		35BBAD	35CBAD	35DBAB	
300 x 600	to soffite		35BBBL	35CBBL	35DBBL	
	300	NOT AVAILABLE	35BBBA	35CBBA	35DBBA	NOT AVAILABLE
	600		35BBBB	35CBBB	35DBBB	
	900		35BBBC	35CBBC	35DBBC	
	1200		35BBBD	35CBBD	35DBBD	
600 x 600	.to soffite	NOT AVAILABLE	35BBCL	35CBCL	35DBCL	NOT AVAILABLE
	300		35BBCA	35CBCA	35DBCA	
	600		35BBCB	35CBCB	35DBCB	
	900		35BBCC	35CBCC	35DBCC	
	1200		35BBCD	35CBCD	35DBCD	
600 x 1200	to soffite		35BBDL	35CBDL	35DBDL	
	300		35BBDA	35CBDA	35DBDA	
	600		35BBDB	35CBDB	35DBDB	
	900		35BBDC	35CBDC	35DBDC	
	1200		35BBDD	35CBDD	35DBDD	

Gypsum plaster tiles concealed grid

tile size	Fixing and suspension	grades				
		A	B	C	D	E
300x 300	to soffite					
	300					
	600		NOT	AVAILABLE		
	900					
	1200					
300x 600	to soffite					
	300					
	600		NOT	AVAILABLE		
	900					
	1200					
600x 600	to soffite	35ACCL	35BCCL	35CCCL		
	300	35ACCA	35BCCA	35CCCA		
	600	35ACCB	35BCCB	35CCCB	NOT	AVAILABLE
	900	35ACCC	35BCCC	35CCCC		
	1200	35ACCD	35BCCD	35CCCD		
600x 1200	to soffite					
	300					
	600		NOT	AVAILABLE		
	900					
	1200					

20 Asbestos compound tiles concealed grid

tile size	Fixing and suspension	grades				
		A	B	C	D	E
300 x 300	to soffit	35ADAL	35BDAL	35CDAL	35DDAL	
	300	35ADAA	35BDAA	35CDAA	35DDAA	
	600	35ADAB	35BDAB	35CDAB	35DDAB	NOT
	900	35ADAC	35BDAC	35CDAC	35DDAC	AVAILABLE
	1200	35ADAD	35BDAD	35CDAD	35DDAD	
300 x 300	to soffit	35ABDL	35BDDL	35CDBL	35DDBL	
	300	35ADBA	35BDBA	35CDBA	35DDBA	
	600	35ADBB	35BDBB	35CDBB	35DDBB	NOT
	900	35ADBC	35BDBC	35CDBC	35DDBC	AVAILABLE
	1200	35ADBD	35BDBD	35CDBD	35DDBD	
600 x 600	to soffit	35ADCL	35BDCL	35CDCL	35DDCL	
	300	35ADCA	35BDCA	35CDCA	35DDCA	
	600	35ADCB	35BDCB	35CDCB	35DDCB	NOT
	900	35ADCC	35BDCC	35CDCC	35DDCC	AVAILABLE
	1200	35ADCD	35BDCD	35CDCD	35DDCD	
600 x 1200	to soffit	35ADDL	35BDDL	35CDDL	35DDDL	
	300	35ADDA	35BDDA	35CDDA	35DDDA	
	600	35ADDB	35BDDB	35CDDB	35DDDB	NOT
	900	35ADDC	35BDDC	35CDDC	35DDDC	AVAILABLE
	1200	35ADDD	35BDDD	35CDDD	35DDDD	

Asbestos compound tiles exposed grid

tile size	Fixing and suspension	grades				
		A	B	C	D	E
300 x 300	to soffit					
	300					
	600					
	900					
	1200					
300 x 600	to soffit	35ADBM	35BDBM	35CDBM		
	300	35ADBF	35BDBF	35CDBF		
	600	35ADBG	35BDBG	35CDBG		
	900	35ADBH	35BDBH	35CDBH		
	1200	35ADBI	35BDBI	35CDBI		
600 x 600	to soffit	35ADCM	35BDCM	35CDCM		
	300	35ADCF	35BDCF	35CDCF		
	600	35ADCG	35BDCG	35CDCG		
	900	35ADCH	35BDCH	35CDCH		
	1200	35ADCI	35BDCI	35CDCI		
600 x 1200	to soffit	35ADDM	35BDDM	35CDDM		
	300	35ADDF	35BDDF	35CDDF		
	600	35ADDG	35BDDG	35CDDG		
	900	35ADDH	35BDDH	35CDDH		
	1200	35ADDI	35BDDI	35CDDI		

22

Mineral fibre tiles concealed grid

tile size	Fixing and suspension	grades				
		A	B	C	D	E
300 x 300	to soffit	35AAAL	35BAAL	35CAAL	35DAAL	
	300	35AAAA	35BAAA	35CAAA	35DAAA	
	600	35AAAB	35BAAB	35CAAB	35DAAB	NOT
	900	35AAAC	35BAAC	35CAAC	35DAAC	AVAILABLE
	1200	35AAAD	35BAAD	35CAAD	35DAAD	
300 x 600	to soffit	35AABL	35BABL	35CABL	35DABL	
	300	35AABA	35ABBA	35CABA	35DABA	
	600	35AABB	35ABBB	35CABB	35DABB	NOT
	900	35AABC	35ABBC	35CABC	35DABC	AVAILABLE
	1200	35AABD	35ABBD	35CABD	35DABD	
600 x 600	to soffit	35AACL	35BACL	35CACL	35DACL	
	300	35AACA	35BACA	35CACA	35DACA	
	600	35AACB	35BACB	35CACB	35DACB	NOT
	900	35AACC	35BACC	35CACC	35DACC	AVAILABLE
	1200	35AACD	35BACD	35CACD	35DACD	
600 x 1200	to soffit	35AADL	35BADL	35CADL	35DADL	
	300	35AADA	35BADA	35CADA	35DADA	
	600	35AADB	35BADB	35CADB	35DADB	NOT
	900	35AADC	35BADC	35CADC	35DADC	AVAILABLE
	1200	35AADD	35BADD	35CADD	35DADD	

Mineral fibre tiles exposed grid

tile size	Fixing and suspension	grades				
		A	B	C	D	E
300 x 300	to soffite					
	300					
	600		NOT AVAILABLE			
	900					
	1200					
300 x 600	to soffite					
	300					
	600		NOT AVAILABLE			
	900					
	1200					
600 x 600	to soffite					
	300	35AACM	35BACM	35CACM	35DACM	35EACM
	600	35AACF	35BACF	35CACF	35DACF	35EACF
	900	35AACG	35BACH	35BACG	35DACH	35EACH
	1200	35AACI	35BACI	35CACI	35DACI	35EACI
600 x 1200	to soffite	35AADM	35BADM	35CADM	35DADM	35EADM
	300	35AADF	35BADF	35CADF	35DADF	35EADF
	600	35AADG	35BADG	35CADG	35DADG	35EADG
	900	35AADH	35BADH	35CADH	35DADH	35EADH
	1200	35AADI	35BADI	35CADI	35DADI	35EADI

24

Aluminium strips concealed grid

tile size	Fixing and suspension	grades				
		A	B	C	D	E
	to soffite		35BEEL	35CEEL	35DEEL	
	300	NOT	35BEEA	35CEEA	35DEEA	
	600		35BEEB	35CEEB	35DEEB	NOT
	900	AVAILABLE	35BEEC	35CEEC	35DEEC	AVAILABLE
	1200		35BEED	35CEED	35DEED	

Trims for rooflights concealed and exposed grid

rooflight size		codes				
		upstand with **concealed** grid not exceeding:				
		300 high	600 high	900 high	1200 high	1500 high
600	600	35KABE	35KACE	35KADE	35KAEE	35KAFE
	900	35KBBE	35KBCE	35KBDE	35KBEE	35KBFE
	1200	35KCBE	35KCCE	35KCDE	35KCEE	35KCFE
	1500	35KDBE	35KDCE	35KDDE	35KDEE	35KDFE
	1800	35KEBE	35KECE	35KEDE	35KEEE	35KEFE
900	900	35KFBE	35KFCE	35KFDE	35KFEE	35KFFE
	1200	35KGBE	35KGCE	35KGDE	35KGEE	35KGFE
	1500	35KHBE	35KHCE	35KHDE	35KHEE	35KHFE
	1800	35KIBE	35KICE	35KIDE	35KIEE	35KIFE
1200	1200	35KJBE	35KJCE	35KJDE	35KJEE	35KJFE
	1500	35KKBE	35KKCE	35KKDE	35KKEE	35KKFE
	1800	35KLBE	35KLCE	35KLDE	35KLEE	35KLFE
1500	1500	35KMBE	35KMCE	35KMDE	35KMEE	35KMFE
	1800	35KNBE	35KNCE	35KNDE	35KNEE	35KNFE
1800	1800	35KPBE	35KPCE	35KPDE	35KPEE	35KPFE
		upstand with **exposed** grid not exceeding:				
		300 high	600 high	900 high	1200 high	1500 high
600	600	35KABK	35KACK	35KADK	35KAEK	35KAFK
	900	35KBBK	35KBCK	35KBDK	35KBEK	35KBFK
	1200	35KCBK	35KCCK	35KCDK	35KCEK	35KCFK
	1500	35KDBK	35KDCK	35KDDK	35KDEK	35KDFK
	1800	35KEBK	35KECK	35KEDK	35KEEK	35KEFK
900	900	35KFBK	35KFCK	35KFDK	35KFEK	35KFFK
	1200	35KGBK	35KGCK	35KGDK	35KGEK	35KGFK
	1500	35KHBK	35KHCK	35KHDK	35KHEK	35KHFK
	1800	35KIBK	35KICK	35KIDK	35KIEK	35KIFK
1200	1200	35KJBK	35KJCK	35KJDK	35KJEK	35KJFK
	1500	35KKBK	35KKCK	35KKDK	35KKEK	35KKFK
	1800	35KLBK	35KLCK	35KLDK	35KLEK	35KLFK
1500	1500	35KMBK	35KMCK	35KMDK	35KMEK	35KMFK
	1800	35KNBK	35KNCK	35KNDK	35KNEK	35KNFK
1800	1800	35KPBK	35KPCK	35KPDK	35KPEK	35KPFK

items	codes	
	Concealed grid	Exposed grid
Support for cubicle curtain tracks or suface mounted lightweight fittings.	35PAAZ 35PABZ	35PAAZ 35PABZ
HOLES FOR PIPES		
up to 50mm in diameter	35NBAD	35NBBD
from 50 to 100 mm in diameter	35NBAH	35NBBH
OPENINGS FOR VENTILATOR GRILLES:		
200 x 200	35LFZA	
300 x 300		35LJZB
300 x 450	35LKZA	
300 x 350		35LQZB
600 x 600	35LPZA	35LPZB
OPENINGS FOR RECESSED LIGHT FITTINGS		
Up to 300mm in diameter	35NAAY	35NABY
200 x 1200	35MAZA	35MAZB
200 x 1500	35MBZA	35MBZB
200 x 1800	35MCZA	35MCZB
300 x 1200	35MDZA	35MDZB
300 x 1500	35MEZA	35MEZB
300 x 1800	35MFZA	35MFZB

Code index

27

To find a coded system in the previous pages use the index below. Columns 1, 2 3 and 4 uses the third, fourth, fifth and sixth letter of the code respectively. For example, to find 35 BACG system, locate B in column 1,A in colum 2, C (relative to A) in colum 3, G (relative to C) in column 4 and read across the page number (23) in the last column.

Column				page
1	2	3	4	
A B C D E	A	ABCD	ABCDL	22
			FGHIM	23
	B	ABCD	ABCDL	18
	C	C	ABCDL	19
	D	ABCD	ABCDL	20
			FGHIM	21
	E	E	ABCDL	24
K	ABCDEFGHIJKLM NP	ABCDEF	EK	25
LMNP	ABCDEFJKMNP	ABZ	ABDEHYZ	26

3|3

MDB reference

0	Use and Index Service document	Use and Index Service document	0/1 0/2
1	Structure	Structure (reprint)	1/1
2	External envelope	Roofing systems Cladding (later) Windows and composite infill panels	2/1 2/2 2/3
3	Internal sub-division	Partitions Door sets Ceiling system Flooring system Cubicles	3/1 3/2 3/3 3/4 3/5
4	Services and Drainage	Sanitary assemblies Sanitary assembly panels	4/1 4/2
5	Fixtures, furniture and equipment	Storage and worktop units Signposting Curtain tracks	5/1 5/2 5/3

Ceiling system